Should Dodgeball Ever Die?

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Abstract

When discussing the game of dodgeball, it is usually with fond memories and excitement for the thrill that came from the game. Then there is those that strongly disliked it for reasons that it was embarrassing, hurtful and just not fun. The game of dodgeball has been experienced by many students in their physical education (PE) classes, for better and for worse. The purpose of this study was to better understand the perceptions, experiences and opinions of recently-former K-12 students toward dodgeball in PE. The results of the study found that generally males enjoyed the game and felt it is worth being played in PE class and females did not like the game and that it did not serve a purpose.
For many, perhaps most, students that participated in K-12 physical education (PE), the following scenario likely played itself out, beginning with the teacher announcing,

“Today, we are going to play dodgeball. There will be two teams and eight balls. If you get hit by a thrown ball, off you go to the sidelines until the last player is standing.”

While rules vary, generally students are divided into two teams with the balls placed at mid-court, the whistle blows and the game begins. Students rush forward, retrieve a ball and throw it at opposing players in hopes of eliminating them. Some—often the most athletic, early-maturing students—are having the time of their lives. They dodge, they jump, and duck to avoid being hit by an opponent’s ball. Some, cleverly, use a retrieved ball to fend off thrown balls. The very confident, brave, or foolish stand in the open, daring the opposition to take their best shot. You see, if they catch the ball the thrower is eliminated. Players from both sides get hit on the arms, legs, torso, groin, or a full-facial! Ouch! Some are hit so hard that they are knocked off their feet.

If a player is struck with a thrown ball, they move to the sidelines, relegated to spectator status. Some teachers allow players to be recycled if, for example, a thrown ball is caught. The game is exciting, energetic, and athletic. Often the sense of self-preservation provides students with the motivation to run, dodge, leap, zig-and-zag, throw and catch, all while raising heart rates (as high as 150 bpm; Strand, Bettinger, & Stewart, 1997)—all desirable outcomes for PE students. What a game! Who would not love this game?

As it turns out, many students do not like this game, going so far as to employ avoidance strategies. Some move quickly to the middle ground, sacrificing themselves to the first ball that sends them to the sidelines. Others hide near the far wall hoping to hide-in-plain-sight or at least dodge the longer throws. Eventually, they are struck and sent to the sidelines where they, along
with the early sacrificial players, happily stand, doing nothing as the game proceeds. “It is better than getting pelted,” they reason. For them dodgeball, is not an enjoyable PE experience.

Nonetheless, for good or bad, dodgeball has been and continues to be a PE standard.

The cumulative effects of negative dodgeball experiences led the National Association for Sport and Physical Education (NASPE) released a position statement specific to the appropriateness of dodgeball in PE:

“NASPE believes that dodgeball is not an appropriate activity for K-12 school physical education programs. The purpose of physical education is to provide students with: the knowledge, skills, and confidence needed to be physically active for a lifetime. A daily dose of physical activity for health benefits. Positive experiences so that kids want to be physically active outside of physical education class and throughout their lifetime (emphasis added, NASPE, 2006).”

NASPE has created three consensus statements outlining appropriate and inappropriate instructional practices with the intent to guide physical educators in elementary (2009a), middle school (2009b), and high school (2009c) PE and to “address key aspects of instructional strategies and practices that are essential to delivery of quality physical education to children, adolescents and young adults.” (NASPE, 2009, p.3) Appropriate practices include “Activities are selected carefully to ensure that they match students’ ability levels and are safe for all students, regardless of ability.” (emphasis added; NASPE, 2009b, p. 3) Inappropriate practices include, “Human-target games (dodgeball) and/or drills that allow aggressive behavior toward other students...” (2009c, p. 11) In all three of these documents, dodgeball is considered an inappropriate instructional practice at all levels. On its face, dodgeball is an elimination game where the least capable get eliminated quickly while the most gifted get all the play time; a case
of the rich getting richer? Those that need the repetition and refinement to gain skill, and the physical activity to produce health benefits are sitting on the sidelines. All things considered there seems to be little to recommend dodgeball in the public schools. Indeed, dodgeball has earned an ignominious place on the PE Hall of Shame (Williams, 1992).

These NASPE consensus statements have afforded Barney and his colleagues the opportunity to investigate knowledge of instructional practices in K-12 PE across a variety of populations. For example, Barney and Pleban (2010) investigated parent’s knowledge of appropriate instructional practices (AIP) in elementary PE. Parents were surveyed asking them to identify the appropriateness of common instruction practices including dodgeball. Parents misidentified as appropriate the following statement: “Teachers may use activities such as relays, dodgeball, and elimination tag since they provide opportunities for everyone in the class.” Surprisingly, 84% of the parent’s felt dodgeball was an appropriate practice in elementary PE. The researchers surmised that if parents were to recall their PE experience—positively or negatively—dodgeball would probably be the activity that defined their PE experience.

Similarly, 75% of school administrators (Barney and Prusak, 2016), misidentified dodgeball as appropriate for K-12 PE. Some administrators did, however, place certain conditions on the practice. One principal stated, “Dodgeball is fine to play, if done correctly…if it is played with soft balls…and…played occasionally, not all the time.” As for the students, Barney & Christenson (2014) surveyed third to fifth grade students and 87% of males and 68% of females felt dodgeball is an appropriate activity for PE class.

These studies illustrate that dodgeball is not only common place in virtually everyone’s PE experience, it is deeply engrained across all segments of our society—almost a given, something not even to be questioned. Curiously, it seems to be a highlight of the PE experience.
Other names for dodgeball including “murderball,” “warball,” “killerball,” and “poisonball” (Crockett, 2014) provide a perverse sense of eagerness toward the game. Further, there exists dodgeball jargon, “headshots”, “kill ratios”, “hits”, and “shootings” (Fagofenis, 2010) further questioning how the game or its verbiage could possibly be considered appropriate.

On the other hand, there seems to be staunch support by the majority of former and current participants cautioning against overlooking the merits of the game. After all, the embattled PE game has spawned recreational (a popular spinoff game is played on a surface of trampolines; (Sky Zone, 2019) and professional leagues and movies (Cooper & Dobkin, 2007).

Although limited, research does exist that presents dodgeball in a more favorable light. Thinking to convince a local teacher why dodgeball should not be included in PE (limited student engagement and resultant lack of cardiovascular fitness), Strand, Bettinger, and Stewart (1997) used heart-rate telemetry to investigate. Over four days, three classes of seventh grade male students wore heart rate monitors as they played a version of dodgeball they called “Road Warrior.” The first day 10 balls were used, the second day, 15 balls, the third day, 20 balls and 25 balls on the fourth day. One of the findings from this study was that one class averaged over 140 Beats Per Minute (BPM) for 17 minutes of class time. The other two class periods had similar results. Interestingly, 45% of the students had lower BPM when they participated in a fitness run during class. The authors concluded that although activity rates did not suffer (as they had supposed), the chance of injury must be weighed carefully when deciding to include dodgeball.

Another population with a vested interest in this debate is the K-12 physical educators. The fourth issue of the 2001, *Journal of Physical Education, Recreation and Dance*, posed the
question, “Is there a place for dodgeball in physical education?” soliciting input from the teachers themselves. A female participant stated,

“As someone who enjoyed dodgeball as a kid, I believe that there is a place for this game in physical education. Dodgeball is a great way for students to enjoy participating in physical education while learning a variety of movement skills…” (p. 18). Another K-12 PE teacher stated, “I graduated college with the notion that dodgeball was not an acceptable activity in physical education. However, I now believe that with modifications, dodgeball can be both an effective and fun activity for all students.” Lastly, another K-12 PE teacher said,

“Safety is the first issue that needs to be addressed in the game. The equipment used should be such that the chance for injury is decreased … In my opinion, the advantages of the game outweigh the disadvantages. If students are instructed and supervised properly, the game can be beneficial to a physical education program, not to mention fun.”

For the past two decades, the debate over dodgeball has raged on. At its core the issue revolves around the rationale of playing human-target games, primarily for safety reasons. But, the popularity of the activity is undeniable. Teachers seem to have made modifications (e.g., equipment, object-targets, role variation to avoid being a human target if students wish, and additional recycling strategies) to reduce unnecessary risk and to take full advantage of the high levels of physical activity. As with any debate, there seem to be arguments both for and against dodgeball. Thus, in a time when positions statements (NASPE, 2006) have largely condemned dodgeball it seems as popular as ever.

On one side, parents, students, administrators, and PE teachers, give at least tacit approval, while on the other, researchers and NASPE, condemn the practice. The present authors
DODGEBALL, APPROPRIATE PRACTICES, PHYSICAL EDUCATION

do not take a philosophical stand for or against the practice. Although the majority of previous
populations studied seem to endorse dodgeball, we wonder about the minority who do not. We
also wonder about those kids who grew up in this time of mixed messages with respect to
dodgeball. Therefore, the purpose of this study was to better understand the perceptions,
experiences and opinions of recently-former K-12 students’ toward dodgeball in PE.

Methods

Participants

A convenience sample of 239 college students (113 males and 126 females) from a
private university located in the western United States participated in the study. Participants for
this study were enrolled in five different university physical activity classes (basketball, bowling,
volleyball, weight training and Zumba). Each participant received, signed and returned a letter of
informed consent and university IRB approval was granted.

Instrumentation

Based on the literature dealing with dodgeball, the researchers developed eight statements
(see items in table 3), assessed on a 5-point Likert-scale (1 = strongly disagree, 2 = disagree, 3 =
neutral, 4 = agree, and 5 = strongly agree). Additionally, students were asked to provide reasons
for their answers on each of the eight statements. Two survey questions asked about the
participants experience with dodgeball. And one survey question was an open-ended question.
The concluding section of the survey addressed demographics. To establish content validity the
researchers asked four college students to read through the survey questions to assure clarity and
understanding of the instrument for the intended population. Further, the survey was pilot tested
on 10 non-participant, college students and was found suitable to its proposed purposes.

Procedures
Permission was sought and attained from university, IRB, the department supervisor, and the individual course instructors to recruit students for this study. The researchers attended each physical activity class, explained the purpose of the study, collected signed letters of informed consent, and administered the 10-minute survey. Ninety eight percent of the students agreed to participate in the study. All students were assured that their voluntary decision to participate or not to participate in the study would not affect their grade or standing in the class.

**Quantitative Data Analysis**

Response frequencies (see Table 1); means, standard deviations (see Table 2); correlations (see Table 3); tests for normality, effects sizes, and between gender differences (see Table 4) were all calculated for each of the nominal variables.

**Open Ended Responses**

Open-ended questions asking for participants to provide reasons for answering the survey question as they had were compiled, transcribed and content-analyzed and offered as anecdotal, supplementary evidence only.

**Results**

**Quantitative results**

**Frequency analysis.** Results revealed that, by in large, dodgeball is contextually a physical education phenomenon with 74.5% of participants reporting that they first learned to play the game in PE. The remaining 25.5% were introduced to the game in afterschool, playground, recreation or other settings. Thus, it can be surmised that the majority of perceptions toward the game can be linked most prominently to PE classes. Next, participants reported playing dodgeball daily (1%), weekly (23%), twice monthly (28%), monthly (19%), and less than once per month (30%).
With respect to the appropriateness of dodgeball, questions three and five (asked in opposite directions) revealed consistent results. Fifty nine percent (39% agree, 20% strongly agree) of all participants reported that they considered dodgeball as an appropriate activity for PE.

Question 4, addressed the proposition that dodgeball would lead to students with lesser skills to be eliminated early or perhaps, by choice would be denied skill building opportunities. Results revealed that students were equally split (7.5% strongly disagreed, 33% disagreed, 22.2% neutral, and 34% agreed, and 3.8% strongly agreed).

A current concern with respect to all forms of bullying prompted the researchers to consider if the aggressive nature of dodgeball might lead to bullying smaller, lesser skilled individuals within gameplay. Forty eight percent of the participants (17% strongly disagreed, 14% disagreed, 37% remained neutral, 14% agreed and 1% strongly agreed) that dodgeball might be a form of bullying.

**Descriptive statistics analysis.** Data was examined and found to be normal ($r_{skewness} = 0.08 - 1.30, r_{kurtosis} = 0.33 - 1.5$). Means, standard deviations, effect sizes, and Pearson correlations were calculated for each of the nominal question and compared across genders. Overall means indicated that (a) participants agreed that dodgeball was appropriate for PE (Q3&5: $m = 3.62$), (b) disagreed that dodgeball led to less skill acquisition (Q4: $m = 2.60$), (c) disagreed that dodgeball was a form of bullying (Q6: $m = 2.51$), and (d) agreed that co-ed dodgeball was appropriate (Q7: $m = 3.38$). However, no mean score was decidedly strongly-agree or strongly-disagree. Rather, means reflected scores slightly above or below a neutral response (i.e., a score of 3) with the exception of males (Q3: $m = 4.04$).
Correlational analysis (see Table 2) revealed: (a) the more often they played, the more appropriate dodgeball became ($r = -0.199$); (b) the more appropriate the students felt dodgeball to be, the less they thought it affected skills ($r = -0.451$); (c) the more appropriate the students felt dodgeball to be, the less they considered it to be a form of bullying ($r = -0.386$); (d) the more appropriate the students felt dodgeball to be, the more they thought it appropriate for co-ed participation ($r = 0.498$).

Comparison tests (see Table 1) revealed significant (Bonferroni adjusted, $p < 0.0125$) gender effects were noted. Females considered dodgeball to be significantly (a) less appropriate than did males (Q3: $F(1, 237) = 42.40, p < 0.000$; Q5: $F(1, 237), p < 0.000$), (b) more likely to adversely affect skills acquisition (Q4: $F(1, 237) = 22.38, p < 0.000$), (c) more likely to consider dodgeball as a form or bullying but still generally disagreed that it did (Q6: $F(1, 237) = 28.78, p < 0.000$), and (d) consider dodgeball to be an appropriate co-ed game (Q7: $F(1, 237) = 9.21, p < 0.01$).

Open ended responses results

Questions 3 and 5. Participants provided additional insight for the reasons they answered questions three through eight as they did. In response to the appropriateness of dodgeball in PE, included the following:

“To many who like PE it was a blast, but if you were shy, not athletically inclined, or had not friends in the class, it was horrible.” (Student 1).

“As much as I like it, I think most of the time at least one student comes out unhappy.” (Student 2).

“It’s not inherently inappropriate but can become a form of bullying if unchecked.” (Student 3).
“I feel that it doesn’t teach students anything. But it is a fun game.” (Student 4).

**Question 4.** When asked if dodgeball doesn’t allow for the less-skilled kids to get better participants responses included,

“Kids who have confidence do very well however this game knocks out kids that don’t have much activity immediately eliminating further activity, … Mostly the dominant players take over the game.” (Student 5).

“I never improved because I would get hit as soon as I got back in the game.” (Student 6)

“Dodgeball doesn’t teach physical skills and isn’t enjoyable for many people especially girls.” (Student 7).

**Question 6.** Participants were asked if dodgeball is a form of bullying. Student responses for this statement included:

“When I got older, kids would use it to pelt kids they didn’t like or make fun of those that were weaker” (Student 8).

“While I love the game, sometimes kids will pick on others. This happens in other sports as well.” (Student 9).

“It can be. Media has painted it as such so those stereotypes are fulfilled in reality.”

**Question 7.** Participants were asked if dodgeball is appropriate for co-ed PE. Responses included:

“Guys throw much harder than girls, it makes most girls feel weak or helpless even if they aren’t in the other sports.” (Student 10).

“Boys have a big advantage usually they can throw the ball a lot harder.” (Student 11)

“It isn’t very fun for most girls who get out very quickly and generally can’t throw as well as males. It is frustrating as a girl.” (Student 12).
“Boys hit harder : (” (Student 13).

**Question 8.** Finally, participants were asked if their experiences playing dodgeball in PE class had a positive or negative effect on their physical activity choices and habits. Interestingly, both positive and negative responses were represented including the following:

“It’s fun and gets people active but doesn’t teach things like staying active on your own.” (Student 14).

“I did not enjoy dodgeball in elementary school and so I pursued other sports which led me to running in high school.” (Student 15).

“It made me not look forward to PE class. I avoided physical activity for some time.” (Student 16).

**Discussion**

The purpose of this study was to better understand the perceptions, experiences and opinions of recently-former K-12 students towards dodgeball in PE. It was generally found that dodge ball holds more appeal to males then females. The results revealed positive and negative experiences from playing dodge ball in PE. The literature has both positive and negative perceptions, experiences and opinions regarding dodge ball. From a positive perspective Strand, Bettinger and Stewart (1997) discovered that when junior high males played dodge ball for 35 minutes they maintained a higher heart rate than when they participated in a fitness run. Barney and Christenson (2014) studied elementary-aged student’s knowledge of appropriate instructional practices in elementary PE. Of the many instructional practices elementary students were asked about, they felt dodge ball was appropriate to play in PE. These studies highlight the positive attitudes and effects dodge ball has on those who participate.
When looking at the negative side of dodge ball Williams (1992) highlighted a number of inappropriate instructional practices that are considered a part of the physical education Hall of Shame. The top inappropriate instructional practice was dodge ball. Williams states that dodge ball’s main focus is to inflict pain, harm students and embarrass the opponent. Williams continues by stating, dodge ball “may have done our profession more harm than any single factor” (p. 57). Barney and Deutsch (2009) studied elementary classroom teachers attitudes and perceptions of elementary PE. Classroom teachers were asked what some of their experiences were in elementary PE. For example, it was stated, “All I remember was running and dodge ball.” Another statement was, “Dodge ball-fat kid-no encouragement, nor variety of activities.” These types of experiences do not bode well for physical education.

One might think that the dodgeball dilemma had long been put to rest. That does not seem to be the case—52% of the participants in this study reported playing dodgeball at least twice monthly. Dodgeball seemingly remains a staple in the majority of current PE practices. Sure, some modifications have been made, but it is clear that many PE teachers and students are not willing to let go of this popular game. Even parents (Barney & Pleban, 2010) and administrators (Barney & Prusak, 2016) are seemingly Ok with the game so why are we still rooting around on this topic? As researchers we try to understand and, if possible, reconcile the polar opinions for and against a game.

Although, participants in this study as well as the majority of each of the populations we have studied in the past are in favor of dodgeball in PE, but not all. In particular, the participants of this study agreed only slightly more than neutral that the game was appropriate. Not surprisingly, males found the game more appropriate, less likely to affect motors skills
acquisition, and less likely to consider it bullying, or appropriate for co-ed play than did the girls.

Therefore, we caution against overstating perceptions of dodgeball as appropriate for PE for all.

We are also concerned with those who are least attracted to the game, those who are perhaps most at risk of physical or emotional damage. Participants of the present study disagreed slightly less than neutral that dodgeball might be considered as a form of bullying. However, the 15% agreed that to some degree that it is, should not be overlooked. On the other hand, we desire to honor the appropriate interests of the participants. If the game refuses to go away, let’s at least make it more safe, less intimidating. Although this paper is primarily a research-based effort, we realize that it is likely that readers may wish for some practical suggestions of how to create a game that takes advantage of its popularity but make it safer for all. Therefore, we offer the following for your consideration.

Dodgeball with a twist.

Modifying the game can remove or mitigate the use of human targets and increase the safety. For example, using bowling pins along the end line as targets, or an earth ball to be driven across opposing lines to score a point, provide plenty of throwing and target practice. When the pins are all knocked down, the game ends. Or combine both in to a game. A student may wish to guard a pin, or perhaps catch a ball in hopes of returning an eliminated player. But, that is their choice.

One can also include alternative recycling strategies to limit the amount of time eliminated players spend along the sidelines. Most versions of the game provide for a caught ball to renter one eliminated player. Here are some other possibilities. Establish a safe zone in enemy territory (e.g., the circle at the free-throw line, outside the three-point line, or from the center circle) where a student can attempt to score a basket. If made some or the entire sideline is
allowed back into the game. Creativity can provide all of the enjoyable elements of dodgeball but also include additional motor skills practice (e.g., shooting baskets). We recommend further that the game be played with soft, light-weight foam balls. Rubber playground balls or volleyballs should never be used. All head shots are banned.

We strongly argue against gameplay that forces all kids to be human targets. Create a game where some are allowed wear red-jerseys placing them in a non-target role who perhaps retrieve balls for the throwers. We also caution about playing co-ed dodgeball in its traditional form. Some females are certainly capable, competitive by nature and might wish to play against the males, but probably not all. Using some of the suggestions above, or other appropriate ideas, might help create a game that is both enjoyable and socially reinforcing.

It is unlikely that dodgeball or the controversy surrounding it will be going away any time soon. It is far more likely that with some creativity, teachers can develop a version of the game that retains all of the desirable physicality, activity, and skills practice while maintaining a appropriate safety levels.

**Limitations**

The researcher has noted limitations to this study. Because the participants came from one university, it may not allow a representative sampling of participants from other colleges or universities or geographic regions, thus limiting the generalizing of the findings. Additionally, the research study was conducted at a private university, which may further limit the generalizability of the findings. Thus, the conclusions and implications are mostly applicable to those participant’s demographics.
References


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<th>Male</th>
<th>Female</th>
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<td>4.04**</td>
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<td>Q7: co-ed Ok</td>
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<td>3.18</td>
<td>.96</td>
<td>1.11</td>
<td>.04</td>
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Note: Questions three and five (in boxes), asked the same question in opposite directions (i.e., dodgeball is *appropriate* [Q3] or *inappropriate* [Q5]) and yielded nearly identical results.
Table 2: Pearson correlations

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<th>Q2: how often</th>
<th>Q3</th>
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<th>Q6</th>
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<td>0.202**</td>
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Note: * = p < .05, ** p < .01
Table 3: Eight items to assess perceptions of dodgeball in physical education

The following survey questions will ask you about experiences with dodgeball in your k-12 physical education classes. Questions will ask you to circle and respond from your experiences with dodgeball in your K-12 PE. Thank you for participating in this survey.

1. Where did you first learn to play dodgeball?
   a. PE class
   b. Afterschool
   c. Playground
   d. Recreation center
   e. Other (specify)

2. How often did you play dodgeball?
   a. Daily
   b. Weekly
   c. Twice monthly
   d. Monthly
   e. Less than once per month

Use the following scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) for the next 4 questions:

3. Dodgeball is an appropriate game for physical education
   Please explain you answer:

4. Dodgeball doesn’t allow for the less-skilled kids to get better.
   Please explain you answer:

5. Dodgeball is an inappropriate game for physical education
   Please explain you answer:

6. Dodgeball is a form of bullying.
   Please explain you answer:

7. Dodgeball is an appropriate game for Co-ed PE classes?
   Please explain you answer:

8. Based on your experience with dodgeball, has it had a positive or negative effect on your physical activity choices and habits. Please explain you answer.